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Application Research of Intelligent Logistics Technology in the Teaching of Logistics Management Major

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Abstract: With the in-depth implementation of education reform, the teaching of logistics management majors in higher vocational colleges should keep pace with the times and attach importance to the application of intelligent logistics technology, so as to improve the effect and efficiency of talent training and enable students to comprehensively apply the professional knowledge they have learned to engage in related work after graduation. To promote the smooth implementation of the reform, it is necessary to conduct a comprehensive analysis of the application value and existing problems of intelligent logistics technology based on the unique school-running orientation of higher vocational education, combined with the teaching characteristics of the logistics management major, and put forward application paths from multiple aspects. The purpose is to promote the in-depth integration of this technology with the teaching of the logistics management major, improve the talent training system, continuously enhance students' practical ability and post-adaptability, cultivate talents with a solid logistics foundation and exquisite intelligent logistics technology ability, and provide useful reference for the teaching reform.

Keywords: Intelligent logistics technology; Logistics management major; Application

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1. Introduction

At present, with the rapid development of the digital economy, the logistics industry has embarked on a transformation path towards intellectualization and digitalization. Against this background, intelligent logistics technologies such as big data and artificial intelligence have emerged and been widely applied in all links of logistics. It can be said that whoever masters intelligent logistics technology will be favored by enterprises [1]. Taking the cultivation of high-quality technical and skilled talents as the core, the logistics management major in higher vocational colleges aims to meet the needs of industry posts. Traditional teaching focuses on logistics theories and basic skills. Although some colleges and universities have begun to integrate content related to

intelligent logistics, there are problems such as superficial integration and backward teaching models, resulting in the disconnection between talent training and the development needs of the industry. Under this background, it is imperative to actively explore the effective application paths of intelligent logistics technology in the teaching of logistics management majors in higher vocational colleges, promote teaching reform through the reconstruction of teaching content and practical system, improve the effect of talent training, and realize the synchronous development of professional education and industrial development [2].

2. Application value of intelligent logistics technology in the teaching of logistics management major in higher vocational colleges

2.1. Making talent training more targeted based on the development needs of the logistics industry

Integrating intelligent logistics technology into the teaching of logistics management majors in higher vocational colleges is conducive to changing the direction of talent training and meeting the needs of its intelligent transformation and development through accurate connection with the logistics industry. At present, the logistics industry is in a critical period of intelligent upgrading, which brings new opportunities and challenges to traditional logistics posts, and some new posts have emerged, such as unmanned warehouse keepers and intelligent scheduling specialists. Under this background, new requirements have been put forward for the post-competence of talents. It is far from enough to only have traditional logistics operation skills, but also necessary to master the application ability of intelligent logistics technology [3]. Integrating the operation of Internet of Things equipment and the operation of intelligent warehousing systems into teaching can create conditions for students to contact cutting-edge industry knowledge and exercise practical skills, facilitating them to understand and master the work processes, post requirements and ability standards under the scenario of intelligent logistics. Such teaching adjustment is conducive to making up for the gap between traditional teaching and industrial development, meeting the development needs of the logistics industry, improving the quality of talent training, making it more targeted and effective, and ensuring the logistics industry has no worries about talent in the process of intelligent development [4].

2.2. Enriching the teaching content system and promoting teaching reform

The integration of intelligent logistics technology is conducive to changing the traditional teaching of logistics management majors in higher vocational colleges, breaking its content boundaries and enriching the professional teaching content system. The main content of the logistics management major is traditional logistics knowledge, such as warehouse management and logistics distribution, which is outdated and not updated promptly. After integrating intelligent logistics technology, content such as the application of Internet of Things technology and intelligent warehousing and distribution can be incorporated to build a new knowledge system that combines traditional logistics knowledge with intelligent logistics technology. At the same time, to meet the teaching requirements of intelligent logistics technology, higher vocational colleges need to not only reform the traditional professional teaching model, but also adjust and optimize teaching methods and practical teaching synchronously. Under this background, an all-round teaching reform is imperative. Such reform is not only conducive to promoting the comprehensive upgrading of professional teaching, transforming it from the previous teaching concept to teaching practice, but also promoting the characteristic development of the major [5].

3. Existing problems in the application of intelligent logistics technology in the teaching of logistics management major in higher vocational colleges

3.1. Insufficient integration of teaching content and lack of systematicness in system construction

At present, in the teaching of logistics management majors in higher vocational colleges, the content of intelligent logistics technology is mostly offered as elective courses or special lectures, and has not been included in the professional core teaching content system, resulting in insufficient systematicness and poor coherence. Some colleges and universities also mention this technology in certain courses, such as warehouse management and logistics information technology, but do not set up core courses or effectively integrate this technology with traditional logistics courses, making the knowledge system learned and mastered by students incomplete. At the same time, the update of teaching content often lags behind industrial technology. The application achievements of technologies such as the Internet of Things and artificial intelligence in the logistics field have not been effectively utilized. There is a big gap between the knowledge learned by students and industrial applications, which cannot meet the post-competence requirements [6].

3.2. Insufficient practical teaching resources and ineffective implementation of technical application training

The teaching of intelligent logistics technology is highly practical and puts forward high requirements for training equipment and scenarios. At present, the practical teaching resources of the logistics management major in many higher vocational colleges cannot meet these requirements. Although many colleges and universities have established their own logistics training centers, the training equipment is still dominated by traditional equipment, and the lack of intelligent logistics training equipment leads to the lack of authenticity in the teaching scenarios built. In addition, the cooperation between colleges and universities and logistics enterprises is superficial, especially the lack of in-depth cooperation with intelligent logistics enterprises [7]. The off-campus training bases established are mainly traditional logistics enterprises, and the intelligent logistics work scenarios only remain in words and have not been truly implemented. Both on-campus training and off-campus practice are based on traditional physical technologies, and the application of intelligent logistics technology is still a castle in the air, which is not conducive to cultivating students' practical ability in intelligent logistics technology.

4. Practical paths for the application of intelligent logistics technology in the teaching of logistics management major in higher vocational colleges

4.1. Optimizing and reconstructing the teaching content system to promote the in-depth integration of intelligent technology and professional courses

The application of intelligent logistics technology in the teaching of logistics management major in higher vocational colleges needs a clear orientation, that is, taking the intelligent development needs of the logistics industry as the specific orientation, and reconstructing the teaching content system of intelligent logistics technology to promote the in-depth integration of intelligent technology and professional courses [8]. To this end, colleges and universities should add core courses such as Application of Intelligent Logistics Technology and Logistics Big Data Analysis to systematically explain the application principles and practical methods of intelligent logistics technology in the teaching of the logistics management major. At the same time, the technology should be integrated into traditional core courses: the operation content of intelligent warehousing

systems should be incorporated into warehouse management courses, the knowledge of intelligent logistics scheduling and path optimization into transportation management courses, and the teaching content of logistics data collection and analysis into logistics information management courses. Thus, traditional logistics knowledge and intelligent logistics technology can infiltrate and integrate with each other to form a new hierarchical teaching content system [9].

When selecting teaching content, higher vocational colleges should proceed from the actual situation of the industry and update the teaching content by integrating the latest technological achievements and post-competence requirements of the intelligent logistics industry. To this end, colleges and universities can set up a professional R & D team consisting of professional teachers and technical experts from logistics enterprises, conduct a comprehensive investigation on the intelligent development trend of the logistics industry, sort out post-competence requirements, and dynamically adjust the teaching content based on industrial development and post needs. Through deletion and addition, the problem of lagging teaching content can be solved to ensure its synchronous development with the industry [10].

4.2. Innovating the teaching implementation model and building a diversified practical teaching platform for intelligent logistics

The logistics management major in higher vocational colleges should carry out a drastic reform of the current teaching implementation model of intelligent logistics technology to solve the drawbacks of traditional classroom teaching and build a new teaching model that focuses on the integration of theory and practice and emphasizes online and offline mixing [11]. In classroom teaching, actively carry out the integration of theory and practice teaching: while explaining the theoretical knowledge of intelligent logistics technology, carry out practical training synchronously. Teachers demonstrate the operation of intelligent logistics equipment and the operation process of intelligent logistics systems on site, facilitating students to intuitively learn and master theoretical knowledge, and arrange practical training for students to help them master theoretical knowledge and practical skills simultaneously [12]. In this process, colleges and universities should also actively use online teaching platforms to build and improve online teaching resource libraries, and timely upload resources such as intelligent logistics technology teaching videos and industry cases for students to learn. Students can study by themselves and conduct simulation exercises in their spare time, which is conducive to breaking the time and space limitations of traditional classroom teaching, facilitating students to learn anytime and anywhere, and improving their self-learning ability [13].

Therefore, colleges and universities should vigorously integrate internal and external resources, build a practical teaching platform for intelligent logistics, and pay attention to the linkage between schools and enterprises to facilitate students' technical training. On campus, focus on the construction of training equipment and intelligent logistics training centers. By equipping advanced training equipment such as AGV handling robots and intelligent sorting equipment, build real teaching scenarios for students. Through the simulation of intelligent warehousing, intelligent distribution and other scenarios, students can carry out practical training of intelligent logistics without leaving the campus [14]. Off campus, focus on in-depth cooperation with intelligent logistics enterprises. By co-building training bases, guide students to enter the enterprise operation site and truly participate in actual work. With the help of real work scenarios, cultivate students' application ability of intelligent logistics technology and shorten their post adaptation period [15].

4.3. Strengthening the construction of teaching staff and building a part-time and full-time double-qualified teaching team

To improve the application effect of intelligent logistics technology in the teaching of logistics management major, higher vocational colleges should build a professional teaching team as a guarantee, and improve teachers' technical literacy and teaching level by formulating a systematic training plan. To this end, colleges and universities should regularly organize professional teachers to participate in special training to learn technical knowledge and practical methods such as the Internet of Things and big data; encourage teachers to go out and take temporary positions in cooperative enterprises, actually participate in the project operation and operation of enterprises, familiarize themselves with the work processes, ability standards and post requirements of the intelligent logistics industry, continuously accumulate practical experience, and transform themselves from theoretical teachers to teachers integrating theory and practice. At the same time, encourage teachers to join the teaching research and curriculum development team, actively transform enterprise practical experience into teaching resources, and continuously improve the effectiveness of teaching.

5. Conclusion

In summary, the intelligent transformation of the logistics industry has given a new direction to the teaching reform of the logistics management major in higher vocational colleges. Integrating intelligent logistics technology into professional teaching is not only conducive to enhancing professional adaptability but also of great benefit to improving the quality of talent training. At present, there are various problems in the application of intelligent logistics technology in the teaching of logistics management majors in higher vocational colleges, such as superficial content integration and insufficient practical resources, which urgently require teaching reform. Based on their own school-running orientation and combined with industry needs, higher vocational colleges can take measures such as optimizing and reconstructing the teaching content system and innovating the teaching implementation model integrating theory and practice, which is conducive to promoting the effective integration of this technology with the teaching of logistics management major, improving students' application ability and post adaptability of intelligent logistics technology, and meeting the development needs of the industry.

Disclosure statement

The authors declare no conflict of interest.

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